# Minnesota Wetland Conservation Act
## Notice of Application

<table>
<thead>
<tr>
<th>Local Government Unit (LGU)</th>
<th>Address</th>
</tr>
</thead>
</table>
| City of Plymouth            | 3400 Plymouth Blvd  
                               | Plymouth, MN 55447                         |

## 1. PROJECT INFORMATION

<table>
<thead>
<tr>
<th>Applicant Name</th>
<th>Project Name</th>
<th>Date of Application</th>
<th>Application Number</th>
</tr>
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<tbody>
<tr>
<td>Three Rivers Park District</td>
<td>Luce Line Trail</td>
<td>11/14/16</td>
<td>NA</td>
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Type of Application (check all that apply):

- ✔ Wetland Boundary or Type Sequencing
- ☐ No-Loss
- ☐ Exemption
- ☐ Replacement Plan
- ☐ Banking Plan

Summary and description of proposed project (attach additional sheets as necessary):

The Three Rivers Park District proposes an extension/connection to the Luce Line along Fernbrook Lane in Plymouth, MN. One wetland was delineated on-site and is described as at Type 3 shallow marsh with Type 1 floodplain forest on the southern fringe. The wetland is dominated by Reed Canary Grass, Cattail, Eastern Cottonwood, and Box Elder.

## 2. APPLICATION REVIEW AND DECISION

Signing and mailing of this completed form to the appropriate recipients in accordance with 8420.0255, Subp. 3 provides notice that an application was made to the LGU under the Wetland Conservation Act as specified above. A copy of the application is attached. Comments can be submitted to:

<table>
<thead>
<tr>
<th>Name and Title of LGU Contact Person</th>
<th>Comments must be received by (minimum 15 business-day comment period):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Derek Asche</td>
<td>12/12/16</td>
</tr>
<tr>
<td>Water Resources Manager</td>
<td></td>
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<table>
<thead>
<tr>
<th>Address (if different than LGU)</th>
<th>Date, time, and location of decision:</th>
</tr>
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<tbody>
<tr>
<td>City of Plymouth</td>
<td>12/13/16</td>
</tr>
<tr>
<td>3400 Plymouth Blvd.</td>
<td>9am</td>
</tr>
<tr>
<td>Plymouth, MN 55447</td>
<td>Plymouth City Hall</td>
</tr>
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<table>
<thead>
<tr>
<th>Phone Number and E-mail Address</th>
<th>Decision-maker for this application:</th>
</tr>
</thead>
<tbody>
<tr>
<td>763-506-5526</td>
<td>☒ Staff</td>
</tr>
<tr>
<td><a href="mailto:dasche@plymouthmn.gov">dasche@plymouthmn.gov</a></td>
<td>☐ Governing Board or Council</td>
</tr>
</tbody>
</table>

Signature: [Signature]  
Date: 11/15/16
3. LIST OF ADDRESSEES

- SWCD TEP member: Ms. Stacey Lijewski, HCD, 701 Fourth Avenue South, Suite 700, Minneapolis, MN, 55415-1600 (sent electronically)
- BWSR TEP member: Ben Meyer, BWSR, 520 Lafayette Road North, St. Paul, MN, 55401-1397 (sent electronically)
- LGU TEP member (if different than LGU Contact):
- DNR TEP member: Beckey Horton, MN DNR, 1200 Warner Road, St. Paul, MN, 55106 (sent electronically)
- DNR Regional Office (if different than DNR TEP member)
  - Kate Drewry, Area Hydrologist, MN DNR, 1200 Warner Road, St. Paul, MN, 55106 (sent electronically)
- WD or WMO (if applicable):
  - BCWMC, c/o Laura Jester, Keystone Waters LLC, 16145 Hillcrest Lane, Eden Prairie, MN, 55467 (sent electronically)

- Applicant (notice only) and Landowner (if different):
  - Justin Valenty, Three Rivers Park District (sent electronically)
- Members of the public who requested notice (notice only):
- Corps of Engineers Project Manager (notice only): Melissa Jenny, Army Corps of Engineers, 180 5th Street East, Suite 700, St. Paul, MN, 55101-1678 (sent electronically)
- BWSR Wetland Bank Coordinator (wetland bank plan applications only)

4. MAILING INFORMATION

- For a list of BWSR TEP representatives: [www.bwsr.state.mn.us/contact/WCA_areas.pdf](http://www.bwsr.state.mn.us/contact/WCA_areas.pdf)
- For a list of DNR TEP representatives: [www.bwsr.state.mn.us/wetlands/wca/DNR_TEP_contacts.pdf](http://www.bwsr.state.mn.us/wetlands/wca/DNR_TEP_contacts.pdf)
- Department of Natural Resources Regional Offices:

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<th>Southern Region:</th>
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<td>1200 Warner Road</td>
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<tr>
<td>Bemidji, MN 56601</td>
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- For a map of DNR Administrative Regions, see: [http://files.dnr.state.mn.us/aboutdnr/dnr_regions.pdf](http://files.dnr.state.mn.us/aboutdnr/dnr_regions.pdf)
  or send to:
  - US Army Corps of Engineers
  - St. Paul District, ATTN: OP-R
  - 180 Fifth St. East, Suite 700
  - St. Paul, MN 55101-1678

- For Wetland Bank Plan applications, also send a copy of the application to:
  - Minnesota Board of Water and Soil Resources
  - Wetland Bank Coordinator
  - 520 Lafayette Road North
  - St. Paul, MN 55155

5. ATTACHMENTS

- In addition to the application, list any other attachments:
  - Wetland delineation report for the Luce Line Trail Project dated 9/27/16 by TRPD
Joint Application Form for Activities Affecting Water Resources in Minnesota

This joint application form is the accepted means for initiating review of proposals that may affect a water resource (wetland, tributary, lake, etc.) in the State of Minnesota under state and federal regulatory programs. Applicants for Minnesota Department of Natural Resources (DNR) Public Waters permits MUST use the MPARS online permitting system for submitting applications to the DNR. Applicants can use the information entered into MPARS to substitute for completing parts of this joint application form (see the paragraph on MPARS at the end of the joint application form instructions for additional information). This form is only applicable to the water resources aspects of proposed projects under state and federal regulatory programs; other local applications and approvals may be required. Depending on the nature of the project and the location and type of water resources impacted, multiple authorizations may be required as different regulatory programs have different types of jurisdiction over different types of resources.

Regulatory Review Structure

Federal

The St. Paul District of the U.S. Army Corps of Engineers (Corps) is the federal agency that regulates discharges of dredged or fill material into waters of the United States (wetlands, tributaries, lakes, etc.) under Section 404 of the Clean Water Act (CWA) and regulates work in navigable waters under Section 10 of the Rivers and Harbors Act. Applications are assigned to Corps project managers who are responsible for implementing the Corps regulatory program within a particular geographic area.

State

There are three state regulatory programs that regulate activities affecting water resources. The Wetland Conservation Act (WCA) regulates most activities affecting wetlands. It is administered by local government units (LGUs) which can be counties, townships, cities, watershed districts, watershed management organizations or state agencies (on state-owned land). The Minnesota DNR Division of Ecological and Water Resources issues permits for work in specially-designated public waters via the Public Waters Work Permit Program (DNR Public Waters Permits). The Minnesota Pollution Control Agency (MPCA) under Section 401 of the Clean Water Act certifies that discharges of dredged or fill material authorized by a federal permit or license comply with state water quality standards. One or more of these regulatory programs may be applicable to any one project.

Required Information

Prior to submitting an application, applicants are strongly encouraged to seek input from the Corps Project Manager and LGU staff to identify regulatory issues and required application materials for their proposed project. Project proponents can request a pre-application consultation with the Corps and LGU to discuss their proposed project by providing the information required in Sections 1 through 5 of this joint application form to facilitate a meaningful discussion about their project. Many LGUs provide a venue (such as regularly scheduled technical evaluation panel meetings) for potential applicants to discuss their projects with multiple agencies prior to submitting an application. Contact Information is provided below.

The following bullets outline the information generally required for several common types of determinations/authorizations.

- For delineation approvals and/or jurisdictional determinations, submit Parts 1, 2 and 5, and Attachment A.
- For activities involving CWA/WCA exemptions, WCA no-loss determinations, and activities not requiring mitigation, submit Parts 1 through 5, and Attachment B.
- For activities requiring compensatory mitigation/replacement plan, submit Parts 1 thru 5, and Attachments C and D.
- For local road authority activities that qualify for the state’s local road wetland replacement program, submit Parts 1 through 5, and Attachments C, D (if applicable), and E to both the Corps and the LGU.
Submission Instructions

Send the completed joint application form and all required attachments to:

**U.S Army Corps of Engineers.** Applications may be sent directly to the appropriate Corps Office. For a current listing of areas of responsibilities and contact information, visit the St. Paul District’s website at: http://www.mvp.usace.army.mil/Missions/Regulatory.aspx and select “Minnesota” from the contact Information box.
Alternatively, applications may be sent directly to the St. Paul District Headquarters and the Corps will forward them to the appropriate field office.

**Section 401 Water Quality Certification:** Applicants do not need to submit the joint application form to the MPCA unless specifically requested. The MPCA will request a copy of the completed joint application form directly from an applicant when they determine an individual 401 water quality certification is required for a proposed project.

**Wetland Conservation Act Local Government Unit:** Send to the appropriate Local Government Unit. If necessary, contact your county Soil and Water Conservation District (SWCD) office or visit the Board of Water and Soil Resources (BWSR) web site (www.bwsr.state.mn.us) to determine the appropriate LGU.

**DNR Public Waters Permitting:** In 2014 the DNR will begin using the Minnesota DNR Permitting and Reporting System (MPARS) for submission of Public Waters permit applications (https://webapps11.dnr.state.mn.us/mpars/public/authentication/login). Applicants for Public Waters permits MUST use the MPARS online permitting system for submitting applications to the DNR. To avoid duplication and to streamline the application process among the various resource agencies, applicants can use the information entered into MPARS to substitute for completing parts of this joint application form. The MPARS print/save function will provide the applicant with a copy of the Public Waters permit application which, at a minimum, will satisfy Parts one and two of this joint application. For certain types of activities, the MPARS application may also provide all of the necessary information required under Parts three and four of the joint application. However, it is the responsibility of the Applicant to make sure that the joint application contains all of the required information, including identification of all aquatic resources impacted by the project (see Part four of the joint application). After confirming that the MPARS application contains all of the required information in Parts one and two the Applicant may attach a copy to the joint application and fill in any missing information in the remainder of the joint application.
PART ONE: Applicant Information

If applicant is an entity (company, government entity, partnership, etc.), an authorized contact person must be identified. If the applicant is using an agent (consultant, lawyer, or other third party) and has authorized them to act on their behalf, the agent’s contact information must also be provided.

Applicant/Landowner Name: Justin Valenty
Mailing Address: 12615 County Road 9
Phone: 763-694-7844
E-mail Address: Justin.valenty@threeriversparks.org

Authorized Contact (do not complete if same as above):
Mailing Address:
Phone:
E-mail Address:

Agent Name:
Mailing Address:
Phone:
E-mail Address:

PART TWO: Site Location Information

County: Hennepin
City/Township: Plymouth
Parcel ID and/or Address: Intersection of County Rd 6 and Fernbrook Lane
Legal Description (Section, Township, Range): 27, 118, 22
Lat/Long (decimal degrees): 44.993678, -93.461377
Attach a map showing the location of the site in relation to local streets, roads, highways.
Approximate size of site (acres) or if a linear project, length (feet): 2,000 ft

If you know that your proposal will require an individual Permit from the U.S. Army Corps of Engineers, you must provide the names and addresses of all property owners adjacent to the project site. This information may be provided by attaching a list to your application or by using block 25 of the Application for Department of the Army permit which can be obtained at:


PART THREE: General Project/Site Information

If this application is related to a delineation approval, exemption determination, jurisdictional determination, or other correspondence submitted prior to this application then describe that here and provide the Corps of Engineers project number.

Describe the project that is being proposed, the project purpose and need, and schedule for implementation and completion. The project description must fully describe the nature and scope of the proposed activity including a description of all project elements that effect aquatic resources (wetland, lake, tributary, etc.) and must also include plans and cross section or profile drawings showing the location, character, and dimensions of all proposed activities and aquatic resource impacts.
PART FOUR: Aquatic Resource Impact Summary

If your proposed project involves a direct or indirect impact to an aquatic resource (wetland, lake, tributary, etc.) identify each impact in the table below. Include all anticipated impacts, including those expected to be temporary. Attach an overhead view map, aerial photo, and/or drawing showing all of the aquatic resources in the project area and the location(s) of the proposed impacts. Label each aquatic resource on the map with a reference number or letter and identify the impacts in the following table.

<table>
<thead>
<tr>
<th>Aquatic Resource ID (as noted on overhead view)</th>
<th>Aquatic Resource Type (wetland, lake, tributary etc.)</th>
<th>Type of Impact (fill, excavate, drain, or remove vegetation)</th>
<th>Duration of Impact Permanent (P) or Temporary (T)</th>
<th>Size of Impact</th>
<th>Overall Size of Aquatic Resource</th>
<th>Existing Plant Community Type(s) in Impact Area</th>
<th>County, Major Watershed #, and Bank Service Area # of Impact Area</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

1. If impacts are temporary; enter the duration of the impacts in days next to the "T". For example, a project with a temporary access that would be removed after 220 days would be entered "T (220)".

2. Impacts less than 0.01 acre should be reported in square feet. Impacts 0.01 acre or greater should be reported as acres and rounded to the nearest 0.01 acre. Tributary impacts must be reported in linear feet of impact and an area of impact by indicating first the linear feet of impact along the flowline of the stream followed by the area impact in parentheses). For example, a project that impacts 50 feet of a stream that is 6 feet wide would be reported as 50 ft (300 square feet).

3. This is generally only applicable if you are applying for a de minimis exemption under MN Rules 8420.0420 Subp. 8, otherwise enter "N/A".

4. Use Wetland Plants and Plant Community Types of Minnesota and Wisconsin 3rd Ed. as modified in MN Rules 8420.005 Subp. 2.

5. Refer to Major Watershed and Bank Service Area maps in MN Rules 8420.0522 Subp. 7.

If any of the above identified impacts have already occurred, identify which impacts they are and the circumstances associated with each:

PART FIVE: Applicant Signature

☐ Check here if you are requesting a pre-application consultation with the Corps and LGU based on the information you have provided. Regulatory entities will not initiate a formal application review if this box is checked.

By signature below, I attest that the information in this application is complete and accurate. I further attest that I possess the authority to undertake the work described herein.

Signature: __________________________ Date: 11/14/2016

I hereby authorize __________________ to act on my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this application.

1 The term "impact" as used in this Joint application form is a generic term used for disclosure purposes to identify activities that may require approval from one or more regulatory agencies. For purposes of this form it is not meant to indicate whether or not those activities may require mitigation/replacement.

Minnesota Interagency Water Resource Application Form February 2014 Page 4 of 11
Attachment A
Request for Delineation Review, Wetland Type Determination, or Jurisdictional Determination

By submission of the enclosed wetland delineation report, I am requesting that the U.S. Army Corps of Engineers, St. Paul District (Corps) and/or the Wetland Conservation Act Local Government Unit (LGU) provide me with the following (check all that apply):

☐ Wetland Type Confirmation

☒ Delineation Concurrence. Concurrency with a delineation is a written notification from the Corps and a decision from the LGU concurring, not concurring, or commenting on the boundaries of the aquatic resources delineated on the property. Delineation concurrences are generally valid for five years unless site conditions change. Under this request alone, the Corps will not address the jurisdictional status of the aquatic resources on the property, only the boundaries of the resources within the review area (including wetlands, tributaries, lakes, etc.).

☐ Preliminary Jurisdictional Determination. A preliminary jurisdictional determination (PJD) is a non-binding written indication from the Corps that waters, including wetlands, identified on a parcel may be waters of the United States. For purposes of computation of impacts and compensatory mitigation requirements, a permit decision made on the basis of a PJD will treat all waters and wetlands in the review area as if they are jurisdictional waters of the U.S. PJDs are advisory in nature and may not be appealed.

☐ Approved Jurisdictional Determination. An approved jurisdictional determination (AJD) is an official Corps determination that jurisdictional waters of the United States are either present or absent on the property. AJDs can generally be relied upon by the affected party for five years. An AJD may be appealed through the Corps administrative appeal process.

In order for the Corps and LGU to process your request, the wetland delineation must be prepared in accordance with the 1987 Corps of Engineers Wetland Delineation Manual, any approved Regional Supplements to the 1987 Manual, and the Guidelines for Submitting Wetland Delineations in Minnesota (2013).
Table of Contents

Introduction ......................................................................................................................... 3
1.0    Methods .................................................................................................................. 3
2.0    Results .................................................................................................................... 3
3.0    References .............................................................................................................. 4

Table 1. Wetland vegetation Summary ............................................................................. 5
Figure 1. Site Location and Existing Wetland Data ......................................................... 6
Figure 2. Soils Data ........................................................................................................... 7
Figure 3. Delineated Wetland Boundary ......................................................................... 8
Figure 4. Antecedent precipitation data for the project site location ................................. 9
Figure 5. Photos of wetland site ...................................................................................... 10
Data Sheets ..................................................................................................................... 11
Introduction

Three Rivers Park District is constructing a new bituminous pavement trail along Fernbrook Lane that will connect the Luce Line Trail to a City of Plymouth trail along County Road $\bar{8}$ (Figure 1). The project will include removing curbing and pavement as well as clearing trees adjacent to Fernbrook Lane. Three Rivers Park District does not intend for construction to occur within the wetland boundaries. The methods and results of the field review and delineation are summarized below. The review was conducted by Justin Valenty of Three Rivers Park District (justin.valenty@threeriversparks.org).

1.0 Methods

Prior to delineating the wetland, the site was remotely assessed by reviewing soils data from the National Resources Conservation Service (Figure 2), and wetland data from the National Wetland Inventory (Figure 1). In order to determine the wetland boundary a routine level 2 wetland delineation was conducted as described in the 1987 Corps of Engineers Wetland Delineation Manual. The Midwest Regional Supplement was used to determine if all three indicators of a wetland were met.

Two transects were conducted to determine the wetland boundary. Each transect included an upland and a wetland plot. At each plot a soil core was taken and vegetation was identified and given an indicator status based on the National Wetland Plant List. Hydrology indicators were also recorded.

2.0 Results

The wetland located adjacent to the project area is listed as a Type 3 shallow marsh on the National Wetland Inventory. There is also a Type 1 floodplain forest listed in the southern portion of the project area. A 30-day cumulative precipitation total was calculated to determine whether antecedent precipitation conditions were considered normal. The normal range for this time of year is between 3 to 5 inches of rain. Precipitation was above normal 2 months prior to the wetland delineation because the area received more than 10 inches of rain in August (Figure 4).

Soils in the wetland plot of the first transect contained 10YR 2/1 sandy loam from 0-15 inches. Redox concentrations were not detected due to the wet soil conditions with the water table being 7 inches below the surface. The dominant vegetation in the wetland plot was Eastern Cottonwood, Box Elder, Reed Canary Grass, and Cattail. The upland plot consisted mainly of Blue Spruce, Box Elder, Canada Goldenrod, and Crownvetch (Table 1). There were no hydric soil characteristics or evidence of wetland hydrology in the upland plot. The second transect along the wetland was dominated by Reed Canary Grass and River Bulrush (Table 1). The soils consisted of 10YR 2/2 clay loam in the upper 6 inches. From 6-20 inches the soil was a 10YR 3/2 clay loam with 7.5 YR 5/8 redox concentrations. The water table was present at 14 inches below the surface and multiple secondary hydrology indicators were met, including dry-season water table, geomorphic position, and the FAC-Neutral test. The presence of surface water in
the wetland and abrupt change in slope were used to determine the wetland boundary (Figure 3).

A soil core was also taken in the forested area in the southern end of the project area to determine if any wetland indicators were met. Vegetation was dominated by Box Elder, Buckthorn, and Stinging Nettle. A 35 inch soil core was taken and there were no hydric soil indicators observed. Wetland hydrology indicators were also absent.

3.0 References


United States Army Corps of Engineers. 2010. Regional supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region. U.S. Army Engineer Research and Development Center. Vicksburg, MS.

<table>
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<th>Scientific Name</th>
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<td>Y</td>
<td>H</td>
<td>OBL</td>
</tr>
<tr>
<td>Canada Thistle</td>
<td>Cirsium arvense</td>
<td>1</td>
<td>H</td>
<td></td>
<td>FACU</td>
</tr>
<tr>
<td><strong>Upland</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eastern</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cottonwood</td>
<td>Populus deltoides</td>
<td>5</td>
<td>Y</td>
<td>T</td>
<td>FAC</td>
</tr>
<tr>
<td>Crownvetch</td>
<td>Securigera varia</td>
<td>100</td>
<td>Y</td>
<td>H</td>
<td>NL</td>
</tr>
<tr>
<td>Canada Thistle</td>
<td>Cirsium arvense</td>
<td>5</td>
<td>H</td>
<td></td>
<td>FACU</td>
</tr>
</tbody>
</table>
Figure 1. Site Location and Existing Wetland Data.
Figure 2. Soils Data.
Figure 3. Delineated Wetland Boundary.
Figure 4. Antecedent precipitation data for the project site location.
Figure 5. Photos of wetland site.
**WETLAND DETERMINATION DATA FORM – Midwest Region**

**Project/Site:** Lake Lure Trail Segment  
**City/County:** Plymouth/Hagepin  
**Sampling Date:** 9-27-2016  
**Applicant/Owner:** Three Rivers Park District  
**State:** MI  
**Sampling Point:** Transport Wet  
**Investigator(s):** J. Van Ert  
**Latitude:** 41°50'58.9"N  
**Longitude:** 89°27'40.67"W  
**Datum:** NAD1983  
**Landform (hillslope, terrace, etc.):** Terraced  
**Local relief (concave, convex, none):** Concave  
**Slopes (%):**  
**Section, Township, Range:**  

**Soil Map Unit Name:** Urban land Usi sampget complex  
**Shales NWI classification:** PEMAC  

**Are climatic / hydrologic conditions on the site typical for this time of year?** Yes √ No (If no, explain in Remarks.)

**Are Vegetation N, Soil N, or Hydrology N significantly disturbed?** Are “Normal Circumstances” present? Yes √ No (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes √</th>
<th>No</th>
<th>Is the Sampled Area within a Wetland?</th>
<th>Yes √</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wetland Hydrology Present?</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:**

**VEGETATION – Use scientific names of plants.**

<table>
<thead>
<tr>
<th>Tree Stratum (Plot size: 30 ft.)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
<th>Dominance Test worksheet:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Acer negundo</td>
<td>30</td>
<td>Y</td>
<td>FAC</td>
<td>4 (A)</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sapling/Shrub Stratum (Plot size: 15 ft.)</th>
<th>Total Cover</th>
<th>Dominance Test worksheet:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Acer negundo</td>
<td>5</td>
<td>4 (A)</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Herb Stratum (Plot size: 5 ft.)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
<th>Dominance Test worksheet:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ilex aquifolia</td>
<td>50</td>
<td>Y</td>
<td>FACW</td>
<td>4 (A)</td>
</tr>
<tr>
<td>2. Tilia americana</td>
<td>20</td>
<td>Y</td>
<td>ORL</td>
<td></td>
</tr>
<tr>
<td>3. Viburnum opulus</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Sambucus canadensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>7.</td>
<td></td>
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<tr>
<td>8.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>9.</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody Vine Stratum (Plot size: 5 ft.)</th>
<th>Total Cover</th>
<th>Dominance Test worksheet:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>74</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:** (Include photo numbers here or on a separate sheet.)
SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 15</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

Hydric Soil Indicators:
- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulphide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- 6 cm Mucky Peat (S2)

Indicators for Problematic Hydric Soils:
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stipped Matrix (S6)
- Loamy Mucky Matrix (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F8)

Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):
- Type: 
- Depth (inches): 

Hydric Soil Present? Yes [ ] No [ ]

Remarks: Water table near surface. Soils favor wet to see redox concentrations.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparingly Vegetated Concave Surface (B8)

Secondary Indicators (minimum of two required)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulphide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction In Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)
- Other (Explain in Remarks)

Field Observations:
- Surface Water Present? Yes [ ] No [ ] Depth (inches): 
- Water Table Present? Yes [ ] No [ ] Depth (inches): 
- Saturation Present? Yes [ ] No [ ] Depth (inches): (includes capillary fringe)

Wetland Hydrology Present? Yes [ ] No [ ]

Remarks:
**WETLAND DETERMINATION DATA FORM – Midwest Region**

**Project/Site:** Lack Line Trail Segment  
**City/County:** Plymouth, Michigan  
**Sampling Date:** 9-9-2016

**Applicant/Owner:** Three Rivers Park District  
**State:** MI  
**Sampling Point:** 1-1-18

**Investigator:** Justin Valente  
**Section, Township, Range:** 30, 37, Town 18, Range 22

**Landform (hillslope, terrace, etc.):** Rockslope  
**Local relief (concave, convex, none):** Convex

**Slope (%):** 44.59  
**Long.:** 93°37'40.87"W  
**Datum:** NAD 1983

**Soil Map Unit Name:** Urban land uplands

**Are climatic/hydrologic conditions on the site typical for this time of year?** Yes / No  
**(If no, explain in Remarks.)**

**Are Vegetation 
\( \lor \) Soil 
\( \lor \) Hydrology 
significantly disturbed?** Are "Normal Circumstances" present? Yes / No

**Are Vegetation 
\( \lor \) Soil 
\( \lor \) Hydrology 
\( \lor \) naturally problematic?** (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes</th>
<th>No</th>
<th>Is the Sampled Area within a Wetland?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wetland Hydrology Present?</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:**

**VEGETATION – Use scientific names of plants.**

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>(Plot size: 30 ft)</th>
<th>Absolute % Cover</th>
<th>Dominant Indicator Species?</th>
<th>Status</th>
<th>Dominance Test worksheet:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Aconitum napellus</td>
<td>15</td>
<td>Y</td>
<td>FAC</td>
<td>Number of Dominant Species That Are OBL, FACW, or FAC</td>
<td>5 (A)</td>
</tr>
<tr>
<td>2. Acer negundo</td>
<td>10</td>
<td>Y</td>
<td>FAC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Poa annua</td>
<td>10</td>
<td>Y</td>
<td>FAC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>35</td>
<td>= Total Cover</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sapling/Shrub Stratum</th>
<th>(Plot size: 15 ft)</th>
<th>Absolute % Cover</th>
<th>Dominant Indicator Species?</th>
<th>Status</th>
<th>Dominance Test worksheet:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Acer negundo</td>
<td>5</td>
<td>Y</td>
<td>FAC</td>
<td>Number of Dominant Species That Are OBL, FACW, or FAC</td>
<td>5 (A)</td>
</tr>
<tr>
<td>2. Ligustrum ovalifolium</td>
<td>5</td>
<td>Y</td>
<td>FAC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>10</td>
<td>= Total Cover</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Herb Stratum</th>
<th>(Plot size: 5 ft)</th>
<th>Absolute % Cover</th>
<th>Dominant Indicator Species?</th>
<th>Status</th>
<th>Dominance Test worksheet:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Solidago canadensis</td>
<td>25</td>
<td>Y</td>
<td>FAC</td>
<td>Number of Dominant Species That Are OBL, FACW, or FAC</td>
<td>5 (A)</td>
</tr>
<tr>
<td>2. Solidago altissima</td>
<td>15</td>
<td>Y</td>
<td>FAC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Agrostis capillaris</td>
<td>20</td>
<td>Y</td>
<td>FAC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Cirsepus arvense</td>
<td>2</td>
<td>Y</td>
<td>FAC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Akalenia alpina</td>
<td>5</td>
<td>Y</td>
<td>FAC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Arctium minus</td>
<td>2</td>
<td>Y</td>
<td>FAC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>10</td>
<td>= Total Cover</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody Vine Stratum</th>
<th>(Plot size: 15 ft)</th>
<th>Absolute % Cover</th>
<th>Dominant Indicator Species?</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Parthenocissus quinquefolia</td>
<td>5</td>
<td>Y</td>
<td>FAC</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>9</td>
<td>= Total Cover</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Prevalence Index worksheet:**

<table>
<thead>
<tr>
<th>Total % Cover of:</th>
<th>Multiply by:</th>
</tr>
</thead>
<tbody>
<tr>
<td>OBL species</td>
<td>0 x 1 = 0</td>
</tr>
<tr>
<td>FACW species</td>
<td>25 x 2 = 50</td>
</tr>
<tr>
<td>FAC species</td>
<td>35 x 3 = 105</td>
</tr>
<tr>
<td>FACU species</td>
<td>34 x 4 = 136</td>
</tr>
<tr>
<td>UPL species</td>
<td>0 x 5 = 0</td>
</tr>
<tr>
<td>Column Totals:</td>
<td>94</td>
</tr>
</tbody>
</table>

**Prevalence Index:**

\[ \text{Prevalence Index} = \frac{A}{B} = \frac{94}{321} = 0.3 \]

**Hydrophytic Vegetation Indicators:**

1. **1 - Rapid Test for Hydrophytic Vegetation**
2. **2 - Dominance Test is >50%**
3. **3 - Prevalence Index is >3.0**
4. **4 - Morphological Adaptations**

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.*

**Hydrophytic Vegetation Present?** Yes / No
SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix</th>
<th>Color (moist)</th>
<th>%</th>
<th>Redox Features</th>
<th>Color (moist)</th>
<th>%</th>
<th>Type</th>
<th>Loc</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.20</td>
<td>7.5%</td>
<td>Sandy Loam</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sandy Loam</td>
</tr>
</tbody>
</table>

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

Hydrical Soil Indicators:

- Histosol (A1)
- Histile Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulphide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- 5 cm Mucky Peat or Peat (S3)

Indicators for Problematic Hydrical Soils:

- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depression (F8)

Hydrical Soil Present? Yes  No ✓

Restrictive Layer (if observed):

<table>
<thead>
<tr>
<th>Type</th>
<th>Depth (inches)</th>
<th>Hydrical Soil Present?</th>
</tr>
</thead>
</table>

Remarks:

HYDROLOGY

Welland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply):

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)

Secondary Indicators (minimum of two are required):

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- FAC-Neutral Test (D5)

Field Observations:

- Surface Water Present? Yes  No ✓ / Depth (inches): 
- Water Table Present? Yes  No ✓ / Depth (inches): 
- Saturation Present? Yes  No ✓ / Depth (inches): 

Wetland Hydrology Present? Yes  No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

US Army Corps of Engineers Midwest Region – Version 2.0
WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lace Line Trail Segment  City/County: Plymouth, Hennepin Sampling Date: 9-27-2016
Applicant/Owner: Three Rivers Park District  State: MIA Sampling Point: Transfer 3 Wet
Investigator(s): Justin Valenta  Section, Township, Range: 50-27, Town 15, Range 22
Landform (hillslope, terraces, etc.): Toad Lake  Local relief (concave, convex, none): Concave
Slope (%): Lat: 44°59'44"N Long: 93°17'32"W Datum: NAD 1983
Soil Map Unit Name: Malapodi-Hamill complex, 6-17% Slopes  SNLI classification: PEMIC

Are climatic/hydrologic conditions on the site typical for this time of year? Yes □ No □
(if no, explain in Remarks)

Are Vegetation □, Soil □, or Hydrology □ significantly disturbed? Are "Normal Circumstances" present? Yes □ No □
(if needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes □ No □</th>
<th>Is the Sampled Area within a Wetland?</th>
<th>Yes □ No □</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>Yes □ No □</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wetland Hydrology Present?</td>
<td>Yes □ No □</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remarks:

VEGETATION – Use scientific names of plants.

<table>
<thead>
<tr>
<th>Tree Stratum (Plot size: 30 ft.)</th>
<th>Absolute % Cover</th>
<th>Dominant Indicator Species?</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Cover

<table>
<thead>
<tr>
<th>Sapling/Shrub Stratum (Plot size: 15 ft.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Total Cover

<table>
<thead>
<tr>
<th>Herb Stratum (Plot size: 5 ft.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phacelia argentea              75  y FACW</td>
</tr>
<tr>
<td>Rishochoene phaeocephala       35  y OBL</td>
</tr>
<tr>
<td>Cirsium arvense                1   n FACW</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Total Cover

<table>
<thead>
<tr>
<th>Woody Vine Stratum (Plot size: 15 ft.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Total Cover

Remarks: (Include photo numbers here or on a separate sheet.)

Dominance Test worksheet:

Number of Dominant Species
That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species
That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

<table>
<thead>
<tr>
<th>Total % Cover of:</th>
<th>Multiply by:</th>
</tr>
</thead>
<tbody>
<tr>
<td>OBL species</td>
<td>35 x 1 = 35</td>
</tr>
<tr>
<td>FACW species</td>
<td>75 x 2 = 150</td>
</tr>
<tr>
<td>FAC species</td>
<td>0 x 3 = 0</td>
</tr>
<tr>
<td>FACU species</td>
<td>1 x 4 = 4</td>
</tr>
<tr>
<td>UPL species</td>
<td>0 x 5 = 0</td>
</tr>
</tbody>
</table>

Column Totals: 189 (A) 189 (B)
Prevalence Index = B/A = 1.7

Hydrophytic Vegetation Indicators:

1. Rapid Test for Hydrophytic Vegetation □
2. Dominance Test is >50% □
3. Prevalence Index is ≤0.1 □
4. Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
   Problematic Hydrophytic Vegetation (Explain)

1Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes □ No □
<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Color (moist)</th>
<th>%</th>
<th>Color (moist)</th>
<th>%</th>
<th>Type</th>
<th>Location</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-0.4</td>
<td></td>
<td>10YR 2/2</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td>Clay Loamy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.4-2.0</td>
<td></td>
<td>10YR 3/2</td>
<td>86</td>
<td>10YR 4/1</td>
<td>10</td>
<td>M</td>
<td>Clay Loamy</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7.5YR 3/2</td>
<td>16</td>
<td>M</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Hydric Soil Indicators:**
- Histisol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- 5 cm Mucky Peat or Peat (S3)

**Restrictive Layer (if observed):**
- Type: 
- Depth (Inches): 
- Hydric Soil Present? Yes / No

**Remarks:**

---

**HYDROLOGY**

**Wetland Hydrology Indicators:**
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparingly Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulphide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gaugo or Well Data (D9)
- Other (Explain in Remarks)

**Secondary Indicators (minimum of two required):**
- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- FAC-Neutral Test (D5)

**Field Observations:**
- Surface Water Present? Yes / No
- Water Table Present? Yes / No
- Saturation Present? Yes / No
- Depth (Inches): [ ]

**Wetland Hydrology Present? Yes / No**

*Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available.*

**Remarks:**

---

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Midwest Region – Version 2.0
WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Luce Line Trail Segment
Applicant/Owner: Three Rivers Park District
Investigator(s): Justin Valenty
Landform (hillslope, terrace, etc.): Footslope
Slope (%):
Slope Let: 45° 59′ 44″ N
Long: 88° 04′ 19″ W

City/County: Plymouth/Hennepin
State: MN
Sampling Point: Transect 2 - Up

Section, Township, Range: Sec. 37, Twp 118, Lang 2d
Datum: H/68

Soil Map Unit Name: Malatol - Hockley Complex, 1 - 12% slopes

Local relief (concave, convex, none): None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes / No (If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? Yes / No

Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes / No
Hydric Soil Present? Yes / No
Wetland Hydrology Present? Yes / No
Is the Sampled Area within a Wetland? Yes / No

Hydrophytic Vegetation Indicators:
1. Rapid Test for Hydrophytic Vegetation
2. Dominance Test >50%
3. Prevalence Index >3.0
4. Morphological Adaptations
5. Problematic Hydrophytic Vegetation

Vegetation – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)

1. Populus deltoides 5 Y FAC
2. 
3. 
4. 
5. 

Sapling/Shrub Stratum (Plot size: 15 ft)

1. 
2. 
3. 
4. 
5. 

Herb Stratum (Plot size: 5 ft)

1. Securinga varia 100 Y AL
2. Circinaria annese 5 FACU
3. 
4. 
5. 
6. 
7. 
8. 
9. 
10. 

Woody Vine Stratum (Plot size: 15 ft)

1. 
2. 

Remarks: (Include photo numbers here or on a separate sheet)

Dominance Test Worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: ______(A)
Total Number of Dominant Species Across All Strata: ______(B)
Percent of Dominant Species That Are OBL, FACW, or FAC: ______(A/B)

Prevalence Index Worksheet:
Total % Cover of: Multiply by:
OBL species x 1 = 6
FACW species x 2 = 0
FAC species x 3 = 15
FACU species x 4 = 20
UPL species x 5 = 0

Column Totals: 10 (A) 35 (B)
Prevalence Index = B/A = 3.5

Hydrophytic Vegetation Present? Yes / No

US Army Corps of Engineers Midwest Region – Version 2.0
### SOIL

**Profile Description:** Describe to the depth needed to document the indicator or confirm the absence of indicators.

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Color (moist)</th>
<th>%</th>
<th>Color (moist)</th>
<th>%</th>
<th>Type</th>
<th>Loc</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-6</td>
<td>10YR 3/2</td>
<td>100%</td>
<td>10YR 3/2</td>
<td>100%</td>
<td>Sandy Gleyed Matrix (S4)</td>
<td></td>
<td>Sandy loam</td>
<td></td>
</tr>
<tr>
<td>6-20</td>
<td>10YR 3/2</td>
<td>80%</td>
<td>10YR 4/4</td>
<td>25%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

**Hydrologic Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (B1)
- 5 cm Mucky Peat or Peat (S3)

**Hydraulic Layer (if observed):**

Type: ____________________________

Depth (inches): __________________

Hydric Soil Present? Yes [ ] No [x]

**Remarks:**

**HYDROLOGY**

**Wetland Hydrology Indicators:**

**Primary Indicators (minimum of one required; check all that apply):**

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Clump (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Conical Surface (B8)

**Secondary Indicators (minimum of two required):**

- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizosphere on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C5)
- Thin Muck Surface (C7)
- Gauge or Well Data (D9)

**Field Observations:**

- Surface Water Present? Yes [ ] No [x] Depth (inches): __________
- Water Table Present? Yes [ ] No [x] Depth (inches): __________
- Saturation Present? Yes [ ] No [x] Depth (inches): __________

**Wetland Hydrology Present?** Yes [ ] No [x]

**Remarks:**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**

US Army Corps of Engineers

Midwest Region – Version 2.0
<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes</th>
<th>No</th>
<th>Is the Sampled Area within a Wetland?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wetland Hydrology Present?</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SUMMARY OF FINDINGS**

- Attach site map showing sampling point locations, transects, important features, etc.

**VEGETATION**

<table>
<thead>
<tr>
<th>Tree Stratum (Plot size: 30 ft.)</th>
<th>Absolute % Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
<th>Dominance Test Worksheet:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acer negundo</td>
<td>85</td>
<td>Y</td>
<td>FAC</td>
<td>Number of Dominant Species That Are OBL, FAC, or FAC:</td>
</tr>
<tr>
<td>2. Chamaecyparis thyoides</td>
<td>10</td>
<td>X</td>
<td>FAC</td>
<td>Total Number of Dominant Species Across All Strata:</td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
<td>Percent of Dominant Species That Are OBL, FAC, or FAC:</td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
<td>Prevalence Index Worksheet:</td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
<td></td>
<td>Total % Cover of:</td>
</tr>
<tr>
<td>Sapling/Shrub Stratum (Plot size: 15 ft.)</td>
<td>95</td>
<td>Y</td>
<td>FAC</td>
<td></td>
</tr>
<tr>
<td>1. Chamaecyparis thyoides</td>
<td>80</td>
<td>Y</td>
<td>FAC</td>
<td>OBL species</td>
</tr>
<tr>
<td>2. Acer negundo</td>
<td>10</td>
<td>Y</td>
<td>FAC</td>
<td>FACW species</td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td>FAC</td>
<td>FAC species</td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td>FAC</td>
<td>FACU species</td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
<td>FAC</td>
<td>UPL species</td>
</tr>
<tr>
<td>Column Totals:</td>
<td>156</td>
<td>(A)</td>
<td></td>
<td>Prevalence Index = D/A = 3.06</td>
</tr>
<tr>
<td>Herb Stratum (Plot size: 5 ft.)</td>
<td>30</td>
<td>Y</td>
<td>FACU</td>
<td></td>
</tr>
<tr>
<td>1. Arctium minus</td>
<td>20</td>
<td>Y</td>
<td>FACU</td>
<td></td>
</tr>
<tr>
<td>2. Acta clinica</td>
<td>10</td>
<td>Y</td>
<td>FACU</td>
<td></td>
</tr>
<tr>
<td>Woody Vines Stratum (Plot size: 5 ft.)</td>
<td>30</td>
<td></td>
<td>FACU</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remarks: (Include photo numbers here or on a separate sheet.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:**

- Normal Circumstances present? Yes | No
- Are normal circumstances present? Yes | No
- Are vegetation, soil, or hydrology significantly disturbed? Yes | No
- Are vegetation, soil, or hydrology naturally problematic? (If needed, explain any answers in Remarks.)

- Are climatic/hydrologic conditions on the site typical for this time of year? Yes | No
- Are normal circumstances present? Yes | No
- Are normal circumstances present? Yes | No

**Hydroporphic Vegetation Indicators:**

1. Rapid Test for Hydroporphic Vegetation
2. Dominance Test is >50%
3. Prevalence Index is ≥3.06
4. Morphological Adaptations

**Problematic Hydroporphic Vegetation:**

Hydroporphic Vegetation Present? Yes | No

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SOIL

Profile Description: (Describe to the depth needed to document the indicator of the concentration or confirm the absence of indications.)

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-15</td>
<td>10YR 3/6</td>
<td>110</td>
</tr>
<tr>
<td>15-20</td>
<td>10YR 3/6</td>
<td>100</td>
</tr>
<tr>
<td>20-30</td>
<td>2.5Y 4/2</td>
<td>100</td>
</tr>
<tr>
<td>30-35</td>
<td>2.5Y 4/2</td>
<td>100</td>
</tr>
</tbody>
</table>

Texture: Clay Loam

Remarks:

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

Hydric Soil Indicators:
- Histosol (A1)
- Histosol Epopedon (A2)
- Black Hieratic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (B1)
- 5 cm Mucky Peat or Peat (S3)

Sandy Gleyed Matrix (S4)
Sandy Redox (S6)
Stripped Matrix (S6)
Loamy Mucky Mineral (F1)
Loamy Gleyed Matrix (F2)
Depleted Matrix (F3)
Redox Dark Surface (F6)
Depleted Dark Surface (F7)
Redox Depressions (F8)

Indicators for Problematic Hydric Soils:
- Coast Prairie Redox (A18)
- Dark Surface (S7)
- Iron-Manganese Masses (F12)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):
Type: __________________________
Depth (inches): __________________________

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:
Primary Indicators (minimum of one is required; check all that apply):
- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B9)

Secondary Indicators (minimum of two required):
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulphide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction In Tilled Soils (C6)
- Thin Muck Surface (C7)
- Gauge or Well Data (D2)
- FAC-Neutral Test (D5)

Field Observations:
Surface Water Present? Yes No
Water Table Present? Yes No
Saturation Present? Yes No

Depth (inches): __________________________

Wetland Hydrology Present? Yes No

Remarks:

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

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